REMARKS

Applicants wish to thank Examiner Hailey for indicating allowability of Claim 3 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants respectfully request reconsideration of the application in view of the following remarks.

The present invention as set forth in **Claim 1** relates to goniochromatic luster pigments comprising **at least one dielectric low-refractive interference-colored layer** which comprises a polar organic solvent which can interact with the layer material via hydroxyl or amide groups.

In other words, the present invention as claimed relates to goniochromatic luster pigments showing interference color due to a specific low-refractive layer according to claim 1. This low-refractive layer includes a polar organic solvent whose molecules are small enough to fit into the molecular lattice of this layer and which contains functional groups which are capable of interacting with the molecular lattice and hence able to durably fix the solvent in the lattice (see page 7, lines 33-38 of the specification).

According to the specification, in one embodiment, the geometric layer thickness of the low-refractive layer are typically in the range from 80 to 800 nm and especially in the range from 150 to 500 nm (see page 3, lines 12-14 of the specification).

Hennemann fail to disclose or suggest goniochromatic luster pigments comprising **at least one dielectric low-refractive interference-colored layer** as claimed.

Hennemann relates to surface-modified conductive pigments obtainable by partial coating of a conductive pigment with an organic modifying agent. Hennemann uses a conductive pigment of carbon black, carbon fibers, Sb-doped tin oxide, Al-doped zinc oxide, fluoride-doped tin oxide or mica, kaolin or barium sulfate, coated with a doped metal oxide.

This conductive pigment is partially coated by reaction with an organic modifying agent (claim 1). However, a partial coating is not a layer. According to Hennemann, column 3, lines 47-49, it is "decisive for the onset of the effect that the surface of the conductive pigment is only partly covered by organic radicals". See also column 3, lines 57-59: **"compared with the amount needed for the formation of a *complete layer*, only 5 to 50% thereof, preferably 10 to 30% is employed"**. Consequently, the partial coverage disclosed by Hennemann is not a layer according to the present invention.

According to Hennemann, a solvent can be used for applying the partial coverage. However, if a solvent is used then it serves merely for better distribution of the modifying agent on the pigment surface (column 3, lines 29-31). If silanes are used, it may be necessary to subject them to preliminary hydrolysis, as acknowledged by the Examiner. However, according to column 3, line 40, removal of the solvent is involved in this operation.

Furthermore, in order to induce interference color, the respective low-refractive layer needs to have a specific thickness. According to http://www.websters-online-dictionary.org/in/interference+color.html, interference color is produced by strengthening or weakening of certain wavelengths of a composite beam of light in consequence of interference. Interference is a physical phenomenon based on the superposition of two or more waves resulting in a new wave pattern. According to http://www.kodak.com/US/plugins/acrobat/en/motion/education/character_of_color.pdf, page 17, interference color is produced by the interference of light waves in thin films.

An incomplete coverage being irregular in geometric thickness is not inducing interference colors because the specific superposition and therefore interference color induction mentioned before is disturbed by these irregularities. Even though Hennemann refers to the pigments according to examples 1 to 10 as "coated pearl luster pigments", a

person of ordinary skill in the art understands that a partial coating on pigments does not cause the interference color as disclosed in the present invention.

In summary:

1. The partial coverage according to Hennemann is not a low-refractive layer comprising a polar organic solvent as claimed in Claim 1 of the present invention.

2. Due to fundamental physical reasons an incomplete surface coverage as in Hennemann is not an interference colored layer as claimed.

Therefore, the rejection of Claims 1, 2 and 4-10 over Hennemann is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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Webster's Online Dictionary
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INTERFERENCE COLOR

Specialty Definition: INTERFERENCE COLOR

Domain	Definition
Mining	One of the spectral colors produced by the strengthening or the weakening of certain wavelengths of a composite beam of light in consequence of interference. This is an important characteristic in determining minerals in thin section or in fragments under the polarizing microscope. (references)

Source: compiled by the editor from various references; see credits.

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Anagrams: INTERFERENCE COLOR

Scrabble® Enable2K-Verified Anagrams

Words within the letters "c-c-e-e-e-e-f-i-l-n-n-o-o-r-r-r-t"

-4 letters: ferroconcrete, ferroelectric.

-5 letters: confectioner, enterocoelic, interference.

Source: compiled by the editor from various references; see credits.

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Alternative Orthography: INTERFERENCE COLOR

Hexadecimal (or equivalents, 770AD-1900s) (references)

49 4E 54 45 52 46 45 52 45 4E 43 45   43 4F 4C 4F 52

Leonardo da Vinci (1452-1519; backwards) (references)

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Scattering also explains why veins close to the surface of the skin are bluish rather than reddish, as might be expected from the color of blood. Actually, the red hemoglobin in these veins is present in such a high concentration that it effectively absorbs all of the light striking it. Hence the usual reflection of light from the deeper tissues does not occur. The only light reflected to the eye is the blue light scattered by the vein wall and the skin layers just above it.

Interference. Color can also be produced by the interference of light waves in thin films. Examples are to be found in a soap bubble or a film of oil floating on water. The light reflected from the top surface of such a film undergoes a reversal of phase, but the light reflected from the bottom surface does not undergo this type of change. With films that are extremely thin in comparison to the wave length of the light, the two reflected rays interfere with each other and cause the film to appear very dark. If the films are somewhat thicker, waves of some lengths interfere, while waves of other lengths reinforce each other, giving rise to colors which vary with the thickness. The reflected light is variously colored, even though the film is illuminated by white light and contains no differentially absorbing materials.

Interference phenomena are also responsible for the colored patterns known as Newton's rings which sometimes cause trouble in color printing work. In this case, the difficulty is due to the proximity of two smooth optical surfaces, such as those of glass and the base side of photographic film. Since neither surface is a perfect plane, there are some areas of actual contact and others where the two surfaces are separated to varying degrees. The colored patterns are formed by interference among the light rays reflected from the two surfaces.

Fluorescence. The use of fluorescence in stage costumes has already been mentioned in another connection. Here the molecules of the fluorescent material absorb energy at one wave length and reradiate it at another. The same principle was used during WW II in the manufacture of colored signalling fabrics. These materials could be seen from remarkable distances because of the intense coloration produced by fluorescent dyes. As a matter of fact, a number of fluorescent dyes are regularly used in the textile industry, because they extend considerably the range of colors which can be made available in finished cloth.

Dispersion. Finally, color may arise from differences in the refractive or bending power of a transparent medium for light of different wave lengths. The rainbow and the spectrum formed by a prism are examples. The flashes of color seen in viewing a cut and polished diamond illuminated by a concentrated light source are also due to dispersion.